

WILDLIFE SERVICES - METHODS DEVELOPMENT

PROGRAM PROFILE

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|------------------------------|--|
| Goal | Ensure that high quality technical/scientific information in animal damage control is available for the protection of crops, livestock, natural resources, property, and public health and safety. |
| Enabling Legislation | Animal Damage Control (ADC) Act of 1931. Wildlife Services was transferred to APHIS from the Fish and Wildlife Service (FWS) on December 19, 1985, pursuant to PL 99-100; H.J. Res. 465,99 cong. 1st Sess. 1985. |
| Economic Significance | Protects America's multibillion-dollar agricultural industry from animal damage. Improves public health and safety by providing protection from wildlife that constitute a public health and safety hazard. |
| Type of Program | The program provides research and development of wildlife damage management techniques and devices for the Wildlife Services program and APHIS clientele. Activities are conducted by the National Wildlife Research Center (NWRC). The Center applies scientific expertise to provide essential information and practical methods to resolve problems and to maintain the quality of environments shared with wildlife. Activities include maintenance and expansion of current pesticide registrations and research on new or improved tools for managing wildlife damage to agricultural, industrial, natural resources, and for safeguarding public health and safety. |
| Program History | Wildlife Services was part of USDA from 1931 until 1939, when it was transferred to the Department of Interior, Fish and Wildlife Service (FWS). In 1985, Congress transferred the program back to USDA-APHIS from FWS. Since then, APHIS has implemented a streamlined management structure, established cooperative programs in the Eastern States, and placed increasing priority on controlling crop damage due to blackbirds and other migratory birds. In FY 1989, Wildlife Services line-item structure was split between Operations and Methods Development. In |

September 1993 construction began on new research and development facilities in Fort Collins, Colorado. The first building for the new location was completed in January 1995. Completion of the main NWRC Wildlife Sciences Building was completed in December 1998. In January 1999, all headquarters NWRC research and support staff vacated three of four temporarily leased structures in Fort Collins to occupy the new Wildlife Sciences Building. With this move, headquarters personnel are once again located at one site.

State and Local Cooperation

Methods development has been carried out cooperatively with other Federal agencies, States, universities, and private organizations.

Involvement of Other Agencies

Agency for International Development, Department of Defense, Environmental Protection Agency, FWS, Federal Aviation Administration, Food & Drug Administration, Forest Service, and Office of International Cooperation and Development.

RESOURCE DATA

-----Obligations-----

| | <u>Direct</u> | <u>Reimbursement</u> | <u>User Fees</u> | <u>Staff-Years</u> | |
|----------------|---------------|----------------------|------------------|--------------------|-------------|
| FY 1996 | 9,716,328 | 581,413 | -- | 119 | |
| FY 1997 | 10,629,715 | 729,700 | -- | 116 | |
| FY 1998 | 10,121,032 | 1,315,733 | -- | 110 | |
| FY 1999 | 10,161,233 | 1,201,376 | -- | 105 | |
| FY 2000 (est.) | 10,357,000 | 1,250,000 | -- | 106 | |
| FY 2001 (est.) | 10,525,000 | 1,300,000 | -- | 102 | |
| | | | | | Contingency |
| | <u>APHIS</u> | <u>Coop</u> | <u>Total</u> | <u>CCC</u> | <u>Fund</u> |
| Cum. (99) | \$98,259,534 | \$13,945,454 | \$112,204,988 | -- | -- |

RECENT ACCOMPLISHMENTS

Non-Lethal Methods Development

NWRC researchers have made significant progress towards developing immunocontraceptive vaccines for non-lethal wildlife damage management.

Wildlife Services Methods Development/2

Investigational New Animal Drug applications were approved by FDA to permit field testing of zona pellucida vaccine and gonadotropin releasing hormone vaccine, for the control of deer and other damage causing wildlife. Studies are underway with two major universities.

NWRC is continuing to evaluate numerous non-lethal chemical products to repel blackbirds and other bird species to reduce consumption of rice and other agricultural commodities. NWRC is also assisting with the re-registration of methiocarb, a proven bird repellent.

Non-lethal methods have been developed for controlling blackbird damage to sunflowers by reducing blackbird roosting habitat in cattail wetlands through the aerial application of an aquatic herbicide. Similarly, methods were developed for reducing cormorant depredation of catfish by dispersing cormorants away from winter roosting sites. These methods are now in use by Wildlife Services operations and producers. Success of these control methods will be monitored through radio- telemetry and Geographic Information Systems applications.

Interdisciplinary research efforts are continuing, to identify materials and develop methods for non-lethal control in Integrated Pest Management programs. Promising materials include predator urines, essential plant oils, volatile sulfur containing compounds and various types of plants and physical barriers which may repel herbivorous rodents as well as deer.

Aviation Safety

NWRC is continuing multi-year research projects at JFK International Airport, Burke Lakefront Airport in Cleveland, Ohio, and Elmendorf Air Force Base to reduce wildlife strike hazards. Turf vegetation management and non-lethal repellents were investigated to minimize the numbers of gulls, waterfowl and hawks that are a threat to aviation safety. Methods to exclude deer from airports using repellents and physical barriers were also investigated.

Methods Improvements and Alternatives

NWRC continues to coordinate a national trap testing program to improve animal welfare in cooperation with the International Association of Fish and Wildlife Agencies and State wildlife departments to meet U.S. commitments to the European Union. Development of performance data on traps in operational use will assist States in improving trapper education programs and preparation of best management practice guidelines. During the initial 2 years, 19 State wildlife agencies, focusing on high priority species captured by state-licensed private trappers, have tested 32 different types of traps.

EPA Registrations

To date, NWRC has reduced the original EPA re-registration data call-in for chemicals to support APHIS's activities, from 433 studies at an estimated cost of \$13.6 million, to 258 studies at an estimated cost of \$3 million. During FY 1998, NWRC developed and validated analytical chemistry methodology, conducted field studies and supervised contract studies, and provided required data submissions for the registration and re-registration of chemicals, including strychnine and zinc phosphide, to reduce agricultural damage caused by numerous small mammals, and DRC-1339, alpha chloralose and methyl anthranilate to reduce bird-related agricultural losses, and public health and aviation hazards. Also, NWRC provided leadership for industry/government consortia to share costs for data gathering to register compounds used to reduce wildlife damage to crops.

Brown Tree Snake (BTS) Control

Research is continuing at NWRC to develop toxicants, fumigants, attractants, and spray repellents for BTS control. NWRC made significant progress during FY 1999 on development of oral toxicants and delivery stations. Aspirin, acetaminophen, ibuprofen, and caffeine were evaluated in laboratory toxicity trials. Of all the products tested thus far, acetaminophen was the most effective, and we obtained an Emergency Use Permit from the EPA to test acetaminophen in the field. Two field trials conducted on Guam in 1999 used acetaminophen placed within bait stations. All snakes that took the baits died. A laboratory trial completed on dermal toxicity of pyrethrins and a spray delivery

device will now allow future field testing. Researchers continued screening chemicals for snake attractants and developed a long-lasting matrix for the lure. We evaluated delivery devices for snake repellents. Since 1993, WS personnel have removed 22,900 brown tree snakes from high-risk ports of exit on Guam.

NWRC Construction

NWRC, through an agreement with the General Services Administration, is continuing construction of its state-of-the-art wildlife management research facility, to complement the NWRC Animal Research Building on the Foothills Research Campus of Colorado State University in Fort Collins, Colorado. In FY 1999, NWRC completed and moved into an 82,000 square foot Wildlife Science Building in Fort Collins. Planning for the Animal Research Support Building and the outdoor pen/warehouse projects continued, and we expect to break ground in late FY 2000.